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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/721,708	11/24/2003	Jennifer Fu	200301173-1	6311
22879 7590 09/24/2007 HEWLETT PACKARD COMPANY P O BOX 272400, 3404 E. HARMONY ROAD INTELLECTUAL PROPERTY ADMINISTRATION FORT COLLINS, CO 80527-2400			EXAMINER MITCHELL, JASON D	
			ART UNIT 2193	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/721,708	Applicant(s) FU, JENNIFER	
	Examiner Jason Mitchell	Art Unit 2193	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 June 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 June 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-21 are pending in this application.

Response to Arguments

2. **Applicant's arguments filed 6/25/07 have been fully considered but they are not persuasive.**

3. Applicant asserts Bocarsly does not anticipate or render obvious "dividing a multi-tier application in to a plurality of tier-specific modules" because Bocarsly only discloses "functional testing" at "points of access" including "the front-end client, middle tier, content sources, and back-end databases" and does not disclose dividing a multi-tier application into a plurality of tier-specific modules. (see the par. bridging pp. 18-19.)

The examiner disagrees. Bocarsly's "points of access" indicate the system is divided into plurality of modules each 'entry point' indicating a specific tier. This may be clearer in view of Bocarsly's disclosure on pg. 9 2nd full par. ("individual test harnesses, applied at all points of access can be used").

4. Applicant asserts Bocarsly does not anticipate or render obvious "testing each of said plurality of tier-specific modules as a black box" because Bocarsly discloses a combination of white and black box testing. In contrast, claim 1 recites the use of just black box testing techniques.

The examiner disagrees. Claim 1 recites a method "comprising ... testing each of said ... modules as a black box". This use of 'comprising' language indicates that an anticipatory reference can properly disclose additional functionality. Accordingly the fact the Bocarsly performs white box testing in addition to the claimed black box testing (i.e. Functional Tests) does not preclude anticipation.

Additionally, it is noted for the sake of furthering prosecution that removing the white box testing would be an obvious simplification (see e.g. MPEP 2144.04 II).

5. Applicant asserts Bocarsly does not anticipate or render obvious "observing an output of one of said plurality of tier-specific modules" because Bocarsly discloses performing both white and black box testing, thus any observed output from Bocarsly's system would be substantially different than the output from Applicant's invention.

The examiner disagrees. The claims recite "observing an output of one of said plurality of tier-specific modules". From this it can be seen that the claimed output is dependant on the modules and not on the type of testing being performed and the claims do not place limitations on the type or format of the output generated by the modules or tests. Additionally as noted above the fact that Bocarsly observes test data generated by white box testing in addition to test data generated by black box testing would not represent a patentable distinction.

Claim Rejections - 35 USC § 102

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6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. **Claims 1-4, 6-14, 16-21 are rejected under 35 U.S.C. 102(b) as being anticipated by “End-to-End Testing of IT Architecture and Applications” by Bocarsly et al. (Bocarsly).**

8. **Regarding Claims 1 and 11:** Bocarsly discloses block box testing in a multi-tier application environment comprising:

dividing a multi-tier application into a plurality of tier-specific modules (pg. 3, 1st full para. “For functional testing, points of access include the front-end client, middle tier, content sources, and back-end databases”); and

testing each of said plurality of tier-specific modules as a black box (pg. 4, “Functional Tests at the Component Level”; pg. 9, 1st full para. “applying ... functional ... testing to each of the content-tier systems separately”); and

Observing an output of one of said plurality of tier-specific modules (pg. 5, 4th para. “data may be accessed and verified at intermediary stages of transmission between system components”).

9. **Regarding Claims 2 and 12:** The rejection of claims 1 and 11 are incorporated, respectively; further Bocarsly discloses an output from a first tier-specific module of said plurality of tier-specific modules is used as input to a subsequent tier-specific module of said plurality of tier-specific modules (pg. 5, 4th para. "data may be accessed and verified at intermediary stages of transmission between system components").

10. **Regarding Claims 3 and 13:** The rejection of claims 2 and 12 are incorporated, respectively; further Bocarsly discloses said output is stored in a computer usable media prior to use as said input (pg. 5, 4th para. "when data is written to temporary database tables").

11. **Regarding Claims 4 and 14:** The rejection of claims 2 and 12 are incorporated, respectively; further Bocarsly discloses said output is stored, prior to said use as said input, for a period of time substantially greater than a time that said output is stored during use of said multi-tier application (pg. 3, 4th and 5th bullets "Test automation, execution, and tracking"; "Test results evaluation").

12. **Regarding Claims 6 and 16:** The rejection of claims 1 and 11 are incorporated, respectively; further Bocarsly discloses at least one of said plurality of tier-specific modules is tested prior to availability of a preceding tier-specific module (pg. 4, 2nd para. "Tests are conducted against individual components as the environment is being build").

13. **Regarding Claims 7 and 17:** The rejection of claims 6 and 16 are incorporated, respectively; further Bocarsly discloses simulated input is used to test said at least one of said plurality of tier-specific modules (pg. 9, 2nd para. "XML requests are submitted to each of the content services").

14. **Regarding Claims 8 and 18:** The method of Claim 1 further comprising performing an end-to-end black box test on said multi-tier application (pg. 5, 3rd para. "When the system has been fully assembled, testing of the environment as a whole can begin.").

15. **Regarding Claims 9 and 19:** The rejection of claims 1 and 11 are incorporated, respectively; further Bocarsly discloses said multi-tier application environment comprises a utility data center (pg. 3, 2nd para. "front-end client, middle tier, content sources, and back-end databases").

16. **Regarding Claims 10 and 20:** The rejection of claims 1 and 11 are incorporated, respectively; further Bocarsly discloses each of said plurality of tier-specific modules executes within a single tier of said multi-tier application environment (pg. 9, 2nd para. "applying ... functional ... testing to each of the content-tier systems separately").

17. **Regarding Claim 21:** Bocarsly discloses a computer usable media comprising test output from a tier-specific module, wherein said tier-specific module performs a

portion of a multi-tier application (pg. 5, 4th para. "when data is written to temporary database tables").

Claim Rejections - 35 USC § 103

18. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

19. **Claims 5 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over "End-to-End Testing of IT Architecture and Applications" by Bocarsly et al. (Bocarsly).**

20. **Regarding Claims 5 and 15:** The rejection of claims 2 and 12 are incorporated, respectively; further Bocarsly discloses:

automatically comparing an output of said first tier-specific module to an input specification of said subsequent tier-specific module (pg. 5, last full para. "data may be accessed and verified at intermediary stages of transmission between system components");

21. Bocarsly does not explicitly disclose halting said testing if said output does not meet said input specification.

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22. It would have been obvious to one of ordinary skill in the art at the time the invention was made to halt said testing if said output does not meet said input specification because the data is corrupted and the bug has been found (pg. 5, 4th para. "For cases in which data corruption can be isolated between two data transmission points, the defective component is localized between those points")

Conclusion

23. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

24. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Mitchell whose telephone number is (571) 272-

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3728. The examiner can normally be reached on Monday-Thursday and alternate Fridays 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jason Mitchell/
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9/4/07


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